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mixture made with alcohol, petroleum ether, water, hydrochloric acid and resins, starches, reducing sugars, proteins, fats, esters, free acids, and so on; this type of analysis of solid fuels allows a prediction to be made as to how the fuel will behave in a furnace. { 'prāk-sə-mət ə 'sɪ-nəl-ə-səs }

proximity detector [ENGINEERING] A sensing device that produces an electrical signal when approached by an object or when approaching an object. { 'prāk-sim-əd-ē di-tek-tər }

proximity sensor [CONTROL SYSTEMS] Any device that measures short distances within a robotic system. Also known as noncontact sensor. { 'prāk-sim-əd-ē 'sen-sər }

ps [MECHANICS] See picosecond.

psec [MECHANICS] See picosecond.

psf [MECHANICS] See pound per square foot.

psi [MECHANICS] See pound per square inch.

psia [MECHANICS] See pounds per square inch absolute.

psid [ENGINEERING] See pounds per square inch differential.

psig [MECHANICS] See pounds per square inch gage.

psophometer [ENGINEERING] An instrument for measuring noise in electric circuits; when connected across a 600-ohm resistance in the circuit under study, the instrument gives a reading that by definition is equal to half of the psophometric electromotive force actually existing in the circuit. { sɒ'fəm-əd-ər }

PSR [ENGINEERING] See primary radar.

psychointegrometer [ENGINEERING] See lie detector. { 'sī-kō'in-tə-grə'm-əd-ər }

psychogalvanometer [ENGINEERING] An instrument for testing mental reaction by determining how skin resistance changes when a voltage is applied to electrodes in contact with the skin. { 'sī-kō-gal-və'nām-əd-ər }

psychomotor performance [INDUSTRIAL ENGINEERING] The degree of skill demonstrated by an operator in the completion of a task. { 'sī-kə-mōd-ər pər'fɔr-məns }

psychomotor task [INDUSTRIAL ENGINEERING] An aspect of a job that requires the operator to use controlled movements of the body. { 'sī-kə-mōd-ər 'task }

psychosomatograph [ENGINEERING] An instrument for recording muscular action currents or physical movements during tests of mental-physical coordination. { 'sī-kō-sə-mad-ə-graf }

psychromatic ratio [THERMODYNAMICS] Ratio of the heat-transfer coefficient to the product of the mass-transfer coefficient and humid heat for a gas-vapor system; used in calculation of humidity or saturation relationships. { 'sī-kra'mad-ik 'rā-shō }

psychrometer [ENGINEERING] A device comprising two thermometers, one a dry bulb, the other a wet or wick-covered bulb, used in determining the moisture content or relative humidity of air or other gases. Also known as wet and dry bulb thermometer. { 'sī-kraim-əd-ər }

psychrometric calculator [ENGINEERING] A device for quickly computing certain psychrometric

data, usually the dew point and the relative humidity, from known values of the dry- and wet-bulb temperatures and the atmospheric pressure. { 'sī-kraime-trik 'kal-kyə-lād-ər }

psychrometric chart [THERMODYNAMICS] A graph each point of which represents a specific condition of a gas-vapor system (such as air and water vapor) with regard to temperature (horizontal scale) and absolute humidity (vertical scale); other characteristics of the system, such as relative humidity, wet-bulb temperature, and latent heat of vaporization, are indicated by lines on the chart. { 'sī-kraime-trik 'chärt }

psychrometric formula [THERMODYNAMICS] The semiempirical relation giving the vapor pressure in terms of the barometer and psychrometer readings. { 'sī-kraime-trik 'fɔr-myə-lə }

psychrometric tables [THERMODYNAMICS] Tables prepared from the psychrometric formula and used to obtain vapor pressure, relative humidity, and dew point from values of wet-bulb and dry-bulb temperature. { 'sī-kraime-trik 'tā-bəlz }

psychrometry [ENGINEERING] The science and techniques associated with measurements of the water vapor content of the air or other gases. { 'sī-kām-ə-trē }

public address system [ENGINEERING ACOUSTICS] See sound-reinforcement system. { 'pəb-lik ə 'dres-sis-təm }

public area [BUILDING CONSTRUCTION] The total nonrentable area of a building, such as public conveniences and rest rooms. { 'pəb-lik 'er-ē-ə }

public utility [INDUSTRIAL ENGINEERING] A business organization considered by law to be vested with public interest and subject to public regulation. { 'pəb-lik yū'til-əd-ē }

public works [INDUSTRIAL ENGINEERING] Government-owned and financed works and improvements for public enjoyment or use. { 'pəb-lik 'wɜrks }

puddle [ENGINEERING] To apply water in order to settle loose dirt. { 'pəd-əl }

puff [MECHANICAL ENGINEERING] A small explosion within a furnace due to combustion conditions. { 'pəf }

pug mill [MECHANICAL ENGINEERING] A machine for mixing and tempering a plastic material by the action of blades revolving in a drum or trough. { 'pəg 'mil }

puking [CHEMICAL ENGINEERING] In a distillation column, the foaming and rising of liquid so that part of it is driven out of the vessel through the vapor line. { 'pyūk-ɪŋ }

puller [MECHANICAL ENGINEERING] A lever-operated chain or wire-rope hoist for lifting or pulling at any angle, which has a reversible ratchet mechanism in the lever permitting short-stroke operation for both tensioning and relaxing, and which holds the loads with a Weston-type friction brake or a releasable ratchet. Also known as come-along. { 'pʊl-ər }

pulley [DESIGN ENGINEERING] A wheel with a flat, round, or grooved rim that rotates on a shaft and carries a flat belt, V-belt, rope, or chain to transmit motion and energy. { 'pʊl-ē }

- in which the solid material to be ground is mixed with liquid. 2. A mill in which the grinding energy is developed by a fast-flowing liquid stream; for example, a jet pulverizer. { 'wet 'mɪl }
- wet scrubber** [ENGINEERING] A device designed to clean a gas stream by bringing it into contact with a liquid. { 'wet 'skrəb-ər }
- wet sleeve** [MECHANICAL ENGINEERING] A cylinder liner which is exposed to the coolant over 70% or more of its surface. { 'wet 'slēv }
- wet slip** [CIVIL ENGINEERING] An opening between two wharves or piers where dock trials are usually conducted, and the final fitting out is done. { 'wet 'slɪp }
- wetted-wall column** [CHEMICAL ENGINEERING] A vertical column that operates with the inner walls wetted by the liquid being processed; used in theoretical studies of mass transfer rates and in analytical distillations; an example is a spinning-band column. { 'wed-əd 'wɒl 'kæl-əm }
- wet-test meter** [ENGINEERING] A device to measure gas flow by counting the revolutions of a shaft upon which water-sealed, gas-carrying cups of fixed capacity are mounted. { 'wet 'tɛst 'mɛd-ər }
- wetting agent** [CHEMICAL ENGINEERING] A substance that increases the rate at which a liquid spreads across a surface when it is added to the liquid in small amounts. { 'wed-ɪŋ ,ə-ʒənt }
- wet well** [MECHANICAL ENGINEERING] A chamber which is used for collecting liquid, and to which the suction pipe of a pump is attached. { 'wet ,wel }
- whaler** [CIVIL ENGINEERING] See waler. { 'wāl-ər }
- wharf** [CIVIL ENGINEERING] A structure of open construction built parallel to the shoreline; used by vessels to receive and discharge passengers and cargo. { 'wɔːrf }
- wheel** [DESIGN ENGINEERING] A circular frame with a hub at the center for attachment to an axle, about which it may revolve and bear a load. { 'wel }
- wheelbarrow** [ENGINEERING] A small, hand-pushed vehicle with a single wheel and axle between the front ends of two shafts that support a boxlike body and serve as handles at the rear. Also known as barrow. { 'wel ,bar-ō }
- wheel base** [DESIGN ENGINEERING] The distance in the direction of travel from front to rear wheels of a vehicle, measured between centers of ground contact under each wheel. { 'wel ,bās }
- wheel dresser** [ENGINEERING] A tool for cleaning, resharpening, and restoring the mechanical accuracy of the cutting faces of grinding wheels. { 'wel ,dres-ər }
- wheeled crane** [MECHANICAL ENGINEERING] A self-propelled crane that rides on a rubber-tired chassis with power for transportation provided by the same engine that is used for hoisting. { 'weləd 'kræn }
- wheel load capacity** [CIVIL ENGINEERING] The capacity of airfield runways, taxiways, parking areas, or roadways to bear the pressures exerted by aircraft or vehicles in a gross weight static configuration. { 'wel 'lɒd kə ,pas-əd-ē }
- wheel sleeve** [DESIGN ENGINEERING] A flange used as an adapter on precision grinding machines where the hole in the wheel is larger than the machine arbor. { 'wel ,slēv }
- white coat** [BUILDING CONSTRUCTION] The finishing coat in plastering. { 'wɪt ,kɒt }
- Whitworth screw thread** [DESIGN ENGINEERING] A British screw thread standardized to form and dimension. { 'wɪt ,wɜːθ 'skrʊ ,θred }
- wicket dam** [CIVIL ENGINEERING] A movable dam consisting of a number of rectangular panels of wood or iron hinged to a sill and propped vertically; the prop is hinged and can be tripped to drop the wickets flat on the sill. { 'wɪk-ət ,dam }
- wicking** [ENGINEERING] The flow of solder under the insulation of covered wire. { 'wɪk-ɪŋ }
- wide-flange beam** [CIVIL ENGINEERING] See H beam. { 'wɪd 'flaŋ 'bēm }
- Wiese formula** [ENGINEERING] An empirical relationship for motor fuel antiknock values above 100 in relation to performance numbers; basis for the American Society for Testing and Materials scale, in which octane numbers above 100 are related to increments of tetraethyllead added to isooctane. { 'vī-zə ,fôr-myə-lə }
- Wild fence** [ENGINEERING] A wooden enclosure about 16 feet square and 8 feet high with a precipitation gage in its center; the function of the fence is to minimize eddies around the gage, and thus ensure a catch which will be representative of the actual rainfall or snowfall. { 'wɪld ,fens }
- Willans line** [MECHANICAL ENGINEERING] The line (nearly straight) on a graph showing steam consumption (pounds per hour) versus power output (kilowatt or horsepower) for a steam engine or turbine; frequently extended to show total fuel consumed (pounds per hour) for gas turbines, internal combustion engines, and complete power plants. { 'wɪl-ənz ,lɪn }
- winch** [MECHANICAL ENGINEERING] A machine having a drum on which to coil a rope, cable, or chain for hauling, pulling, or hoisting. { 'wɪnʃ }
- winch operator** [ENGINEERING] See hoistman. { 'wɪnʃ ,əp-ə ,rād-ər }
- windage** [MECHANICS] 1. The deflection of a bullet or other projectile due to wind. 2. The correction made for such deflection. { 'wɪn-dij }
- windage loss** [ENGINEERING] In a ventilating or air-conditioning system, the decrease in the water content of the circulating air due to the loss of entrained droplets of water, expressed as a percentage of the rate of circulation. { 'wɪn-dij ,ləs }
- wind box** [ENGINEERING] A plenum chamber that supplies air for combustion to a stoker, gas burner, or oil burner. { 'wɪnd ,bɔks }
- windbreak** [ENGINEERING] Any device designed to obstruct wind flow and intended for protection against any ill effects of wind. { 'wɪn ,bræk }
- wind cone** [ENGINEERING] A tapered fabric sleeve, shaped like a truncated cone and pivoted at its larger end on a standard, for the purpose of indicating wind direction; since the air enters the fixed end, the small end of the cone points away from the wind. Also known as wind sleeve; wind sock. { 'wɪn ,kɒn }
- wind correction** [ENGINEERING] Any adjustment